FOR INSPIRATION AND RECOGNITION OF ENGINEERING
REGULAMENTO 2026

WHO ARE WE?

JACTECH, whose name refers to the city of Jacareí and the technology we aim to impact, is the first team from our city to participate in the FIRST Robotics Competition (FRC), representing SESI SENAI Jacareí. Our mission is to bring robotics to as many people as possible, using technology to positively influence our country.

DRIVEN BY STEAM

S - Science (Ciência);
T - Technology (Tecnologia);
E - Engineering (Engenharia);
A - Art (Artes);
M - Mathematics (Matemática).

Get to know our book specially designed to help you learn more about the STEAM acronym: ***JAC DISCOVERING STEAM***

HOW DID FIRE START?

The championship “For Inspiration And Recognition Of Engineering” was born from one of its founding members’ passion for engineering and competitions, driven by the desire to take part in events in this field. Thus, FIRE is much more than a competition: it is a space where visionary young people have the opportunity to stand out by finding creative solutions to real-world challenges.

In this challenging environment, participants will have the opportunity not only to apply what they know, but also to learn while solving complex problems, promoting innovation and ingenuity.

ABOUT THIS SEASONS THEME:

At this year 's edition the main theme is **"Sustainable Energy: Developing projects to sustainably address the increasing energy demand in Brazil and worldwide."**

At this edition, participants need to develop innovative solutions to generate sustainable energy in a safe and efficient way, exploring new plant technology, hybrid systems and new distribution methods, focusing on reducing ambient impacts and the magnification of energy access. The idea solutions treated at this season could be related at this three main areas:

1. **Renewable Energy Generation:** Energy production from clean sources such as solar, wind, and hydroelectric. Focus on expanding access and reducing environmental impacts.
2. **Energy Storage:** Developing solutions to store energy for later use. This includes batteries, hydrogen, and backup systems.
3. **Innovations in energy systems:** Innovation in systems that deliver and generate energy efficiently and in a balanced way. This includes smart grids, new distribution options, generation through new means, and access to remote regions.

ABOUT THE COMPETITION:

1. FIRE is an engineering championship that aims to encourage students to become future engineering leaders in a fun and innovative way;
2. When the main theme is announced, participants must develop a group solution through physical or digital prototyping, presented in a video or as a drawing to be submitted in a digitized format;
3. The new **Autonomous** category is open-ended and not necessarily related to the season's main challenge. In this category, participants must create an autonomous device using their knowledge of electronics, which must also be presented through an explanatory video.
4. All students enrolled in Middle School or High School are eligible to register;
5. By participating in the FIRE championship, all eligible participants automatically agree to the following conditions:
    a. Human rights must not be violated;
    b. Use of offensive language is not allowed;

c. A brief presentation of the team is mandatory, including its name and members;
d. For video submissions, image and audio quality must be adequate for evaluation;
e. For image files, visual quality must be sufficient for evaluation;
f. Participants confirm the truthfulness of all information provided during the event;
g. Participants accept full and exclusive responsibility for the means used in the creation of the project, guaranteeing its originality and ownership;
h. Participants commit not to violate anyone's privacy, honor, or image;
i. SESI SENAI JACTECH and its partner companies are exempt from any liability related to these facts, aspects, rights, and/or situations;
j. Participants assume all expenses, including those related to prototyping, internet, equipment, and any other costs associated with participation;
k. The organizing committee reserves the right to change the rules with at least 10 days' notice before the changes take effect.

REGISTRATION (VIDEO SUBMISSION)	EVALUATION	RESULTS
May 5th to August 30th of 2026	September 1th to 25th of 2026	October 8th of 2026

ABOUT REGISTRATION:

1. Registration period: May 5 to August 30; **IMPORTANT:** The video must be submitted through the same registration form. Therefore, pay close attention to the deadline.
2. The solution to the challenge must be proposed by groups of up to 3 people;
3. Registration must be completed as a group, but certificates will be issued individually;
4. Team members must be from the same educational institution and the same level (01, 02, or 03);
5. It is necessary to create a team name for identification purposes.

ABOUT THE AMBASSADORS:

1. FIRE Ambassadors play a fundamental role in spreading the championship within their communities. They are responsible for encouraging and supporting teams interested in participating.

2. The main goal of the Ambassadors is to promote FIRE using their own communication channels, as well as to foster the spirit of engineering, creativity, and innovation in the schools and regions where they operate.

3. The three ambassadors who stand out the most in supporting teams, either by promoting the championship or assisting in the registration process, will receive an exclusive gift from the SESI SENAI JACTECH team, as recognition for their impact and dedication during this edition of FIRE.

HOW TO BECOME AN AMBASSADOR:

1. To become a FIRE Ambassador, simply register using the official form available at the following link: https://forms.gle/4TMQ9ijV8Hb5GmXeA
2. Fill out all the information correctly to ensure your participation and identification.

ABOUT THE CATEGORIES:

1. Teams may choose from the following categories: ART (technical or artistic), MAKER PROTOTYPE (physical or digital), and AUTONOMOUS (electronics/programming);
2. For those who choose modeling, Maker Prototype (physical or digital), it is required to make a video about the project and submit it through the registration form available on the FIRE link;
3. Those who choose the Autonomous category must submit a video explaining in detail the programming and electronics of the autonomous device designed by the team, and submit it via the registration form;
4. Those who choose the drawing category must submit a photo or scanned file through the registration form available on the FIRE link.

ART:

1. In this category, participants must express ideas and solutions through drawings. The works can be technical or artistic, as long as they are related to the proposed theme.
2. Examples include: technical drawing of an invention or equipment, artistic illustration of a solution for a social or environmental problem, conceptual art inspired by themes of science, technology, or engineering.

MAKER PROTOTYPE:

1. This category is intended for the creation of physical or digital prototypes, allowing participants to develop practical solutions based on the competition theme. 3D modeling projects are also accepted, provided they present a functional application or innovative concept.
2. Examples include: prototypes made from recyclable or easily accessible materials, simple digital projects (on platforms such as Tinkercad, Scratch, or similar), simple physical devices such as models or manual mechanisms.

AUTONOMOUS:

1. This category aims at creating robotic prototypes without human intervention, using electrical and electronic components, allowing participants to apply their general robotics and programming knowledge. Only physical devices programmed by a computer and performing tasks autonomously can be considered robots.
2. Examples include: an Arduino-based gate that opens automatically when a proximity sensor detects something; a LEGO prototype that sorts pieces by their respective colors without human intervention.
3. To submit in the Autonomous category, participants must be within Levels 2 and 3. **For evaluation, it is necessary to send a photo/document of the robot's programming and a video explaining the operation and programming of the autonomous device.**

ABOUT THE VIDEO AND SUBMISSION (MAKER PROTOTYPE or AUTONOMOUS):

1. The video must include a description at the beginning (a cover image containing a brief description with the basic concept used), lasting up to 15 seconds;
2. It is forbidden for a non-registered person to represent the team in the video;
3. All team members must participate in the video (presentation, production, or editing);
4. The video length must not exceed 3 MINUTES;
5. The video must be submitted via the event registration form: https://forms.gle/H7iT2zqcFtEUVMRp9 by August 30, 2026.

ABOUT THE IMAGE FILE AND SUBMISSION (ART):

1. The image file must contain a photo of the drawing on an A4 sheet, either horizontal or vertical orientation;

2. Submission is limited to only 1 file per team;

3. Like the video, the image file must be submitted via the event registration form: **https://forms.gle/H7iT2zqcFtEUVMRp9** by August, 2026.

ABOUT THE EVALUATION PROCESS:

1. The evaluation period for the videos will take place from September 1 to September 25, 2026;
2. The best videos will be reviewed by representatives of the main sponsor supporting the development of this championship, Rockwell Automation;
3. The competition will be divided into three levels, following the same evaluation criteria, but with distinct awards based on age groups, as explained below:
   a. **Level 01**: Teams from 1st to 5th grade (Elementary School);
   b. **Level 02**: Teams from 6th to 8th grade (Middle School);
   c. **Level 03**: Teams from 9th to 12th grade (High School).
4. The evaluation criteria will be divided among the three categories of this edition: **ART** (technical/artistic), **MAKER PROTOTYPE** (physical/digital), and **AUTONOMOUS** (Programming and Electronics);

EVALUATION CRITERIA:

1. **ART:**

CRITERIA	CONCEPT	SCORE (0 TO 100 POINTS)
Understanding of the theme	Evaluates whether the project clearly addresses the proposed theme and whether the execution reflects a creative interpretation of it.	20
Creativity and Originality	Evaluates the innovation and originality of the design or model presented, considering unique and/or innovative solutions.	25
Technical Proficiency	Evaluates the correct application of engineering concepts, theories, and techniques.	10
Clarity of Idea/Concept	Evaluates how clearly the central idea or concept of the work is expressed, and whether it is easily understood by the audience.	10

Feasibility	Evaluates whether the proposed solutions through the drawing or modeling are practically feasible.	10
Adaptability and Flexibility	Analyzes the project's ability to adapt to different scenarios or future needs.	10
Project sustainability	Analyzes the overall sustainability capacity of the evaluated project to meet human needs without directly harming the environment.	15

2. **MAKER PROTOTYPE:**

CRITERIA	**CONCEPT**	**SCORE** **(0 TO 100 POINTS)**
Functionality	Evaluates whether the prototype correctly performs its intended function.	20
Innovation	Evaluates the clarity of the central idea or concept of the work, and whether it is easily understood by the audience.	25
Usefulness	Evaluates how effective the prototype is in solving the problem or addressing the proposed need.	20
Documentation/Technical Justification	Evaluates whether the solutions proposed through modeling are practically feasible.	10
Feasibility	Analyzes the project's ability to adapt to different scenarios or future needs.	20
Sustainability/Environmental Impact	Evaluates whether the prototype considers sustainability and environmental impact in the choice of materials and processes.	5

3. AUTONOMOUS

CRITERIA	CONCEPT	SCORE (0 TO 100 POINTS)
Complexity	It assesses the depth and sophistication of the project, taking into account the function performed by the device, the level of component integration, as well as the overall structure of the project, including planning and innovation.	10
Clarity	Consider the team's ability to communicate their ideas, observing the quality of the oral presentation, conceptual clarity, and the use of practical examples and analogies.	15
Technical Knowledge	It reflects mastery of the programming language used, knowledge of electrical and electronic engineering applied, as well as the ability to justify choices and explain how the device works.	15
Autonomy	It evaluates the device's level of independence from human intervention, its embedded intelligence, and the efficiency of the proposed automation.	25
Documentação	This refers to the visual quality of the project documentation, such as photos, diagrams, prototyping records, and the availability of relevant files and code.	10
Documentation	Consider the practical execution of the task assigned to the device, including its effectiveness, accuracy, and operational capability.	15
Creativity	Evaluate the innovation and authenticity of the prototype assembled by the team.	10

ABOUT THE AWARDS:

1. At the end of the competition, a certificate will be provided through the communication channel indicated by the team in the event registration form, according to their final placement (first place, second place, third place, honorable mention, and certificate of participation);

2. First place will receive a trophy in addition to the certificate;
3. The JACTECH team will contact the winning team to collect the necessary information for shipping the trophy;
4. The awards will be announced through a post on the official @jactech_9458 Instagram account on October 25, 2025, and we will contact the winning team directly.

SPECIAL AWARDS:

1. **Erika Honma Award**: This award is dedicated to the mentor who stood out the most by impacting their team(s) and generating engagement within their school during the FIRE competition. The evaluation will be based on a written statement explaining how the mentor supported the team throughout the season, to be submitted through the registration form.

2. **Girls in STEAM Award**: This award is dedicated to a student or ambassador who stood out by creating impactful projects or mobilizing students, directly influencing their team(s) through creative and innovative ideas in the production of materials or teamwork methodologies. The evaluation will be based on a written statement detailing the student's or ambassador's active participation during the season, to be submitted through the registration form.

3. **Make It Sustainable Award:** This award is dedicated to the team that has most distinguished itself in its ability to develop a project that supports sustainability, not only considering environmental impact, but also creative and sustainable solutions that contribute to the development of society.